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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/757,192

01/14/2004

Jimmie Earl DeWitt JR.

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EXAMINER

PHAN, RAYMOND NGAN

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,192	DEWITT ET AL.	
	Examiner	Art Unit	
	Raymond Phan	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19,23-30,33-40,42 and 44-53 is/are rejected.
- 7) ☒ Claim(s) 20,21,31,32,41 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01142004</u> . | 6) <input type="checkbox"/> Other: _____ |

Part III DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-53 are pending.
2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 12-13, 18, 22-23, 28, 33, 39, 44-46, 51 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hammond et al. (US No. 6,408,386).

In regard to claims 1, 12, 22, 33, 44, Hammond et al. disclose a method of processing performance information in a data processing system (see abstract), comprising the steps of: receiving an interrupt signal at an interrupt unit of a processor of the data processing system (see figure 5a&b, col. 9, line 57 through col. 10, line 48); determining if at least one of a pre handler routine and a post handler routine are enabled for an interrupt (see col. 10, lines 29-49); invoking the

pre handler routine to record events at a first instant if the pre routine is enabled (see col. 10, lines 36-42); invoking an interrupt handler routine (see col. 10, lines 36-42); and invoking the post handler routine to record events at a second instant if the post handler routine is enabled (see col. 10, lines 42-48).

In regard to claims 7, 18, 28, 39, 51, Hammond et al. disclose further a plurality of pre handler routines and a plurality of post handler routines, wherein each pre handler routine and each post handler routine records a different event on the occurrence of an interrupt (see col. 10, lines 3-28).

In regard to claim 13, 23, 34, 45-46, Hammond et al. disclose wherein the trace record includes a from address of an instruction indicating where the interrupt occurs (see col. 10, lines 14-28).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-6, 8-11, 14-17, 19, 24-27, 29-30, 35-38, 40, 42, 47-50, 52-53 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammond et al. in view of Levine et al. (US No. 5,691,920).

In regard to claims 2, 14, 35, 47, Hammond et al. teach the claimed subject matter as discussed above except the teaching of wherein recording events includes recording a plurality of counts. However Levin et al. disclose the method and system for performance monitoring comprising the step of recording events including recording a plurality of counts (see col. 10, lines 7-35). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the

invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claims 3, 17, 27, 38, 49, Levine et al. disclose wherein recording events includes recording a timestamp (see col. 9, lines 4-35). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claims 4, 15, 25, 36, 48, Levine et al. disclose wherein the count represents the number of times an event occurs (see col. 10, line 57 through col. 11, line 14). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claims 5, 16, 26, 37, 50, Levine et al. disclose wherein the event is selected from the group consisting of cache misses and number of instructions executed (see col. 14, lines 1-26). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claims 6, 19, 29, 40, 52, Levine et al. disclose wherein the first and second instants are associated with first and second timestamps, respectively (see col. 9, lines 4-45). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the

teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claim 8, Levine et al. disclose wherein recording events includes accumulating a total value of counts (see col. 10, line 65 through col. 11; line 3). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claim 9, Levine et al. disclose wherein the total value of counts is accumulated by adding counts of events recorded (see col. 10, line 65 through col. 11, line 14). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claim 10, Levine et al. disclose wherein the total value of counts is displayed in a performance analysis tool (see col. 10, line 65 through col. 11, line 14). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

In regard to claim 11, 30, 42, 53, Levine et al. disclose wherein the count is not updated when the pre or post handler routine is invoked (see col. 11, lines 31-54). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Levine et

al. within the system of Hammond et al. because it would identify potential areas of system enhancements.

Allowable Subject Matter

8. Claims 20-21, 31-32, 41, 43, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 20, 31, 41 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach wherein the pre handler routine or the post handler routine monitors a count of recorded events to determine if an overflow occurred.

Conclusion

10. Claims 1-19, 23-30, 33-40, 42, 44-53 are rejected. Claims 20-21, 31-32, 41, 43 are objected.

11. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Zimmer et al. (US No. 6,775,728) disclose a method and system for concurrent handler execution in an SMI and PMI-based dispatch-execution frame-work.

Christie (US No. 6,757,771) discloses a stack switching mechanism in a computer system.

Hammond (US No. 6,757,771) discloses a processor event recognition.

Bonola (US No. 6,275,893) discloses a method and apparatus for providing seamless hooking and intercepting of selected kernel and HAL exported entry points in an operation system.

Letwin (US No. 4,825,359) discloses method and operating system for executing programs in a multi-mode microprocessor.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (571) 272-3639 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].


All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [hop://pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571) 272-2100.

RP

Raymond Phan
November 29, 2005


REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
12/5/05